12-19-1870

Captain Samuel Adams. (To accompany bill H. R. No. 2585.) Communication from captain Samuel Adams relative to the exploration of the Colorado River and its tributaries.

41ST CONGRESS, 3d Session. } HOUSE OF REPRESENTATIVES. { MIS. DOC. No. 12.

CAPTAIN SAMUEL ADAMS.

[To accompany bill H. R. No. 2565.]

COMMUNICATION

FROM

CAPTAIN SAMUEL ADAMS

RELATIVE TO

The exploration of the Colorado River and its tributaries.

DECEMBER 19, 1870.—Ordered to be printed.

WASHINGTON, D. C., *March* 29, 1867.

SIR: I take the liberty in this communication to call your attention to a few facts in reference to the great commercial importance of the Colorado of the West as being the central route between the Atlantic and Pacific Oceans. In the individual and difficult enterprise of demonstrating that it was capable of being ascended with steamers for over 620 miles from the mouth, I have, in connection with Captain Trueworthy, been engaged for the last three years. In the spring of 1864 I descended the river 350 miles on a small raft, everywhere seeing the most unmistakable evidences that this natural thoroughfare had been much misrepresented by published reports, as well as by the exaggerated statements of those who professed to be familiar with the rapids, cañons, &c., of the same. I made my representations to Captain Trueworthy, of San Francisco, who consented to come to the Colorado for the purpose of relieving the mining community of the imposition which was practiced upon them, as well as upon the Government, by the only steam navigation company on the river, which for over ten years had monopolized the entire trade of the Colorado for 300 miles from the Gulf, this company being a branch of the powerful Combination Navigation Company of California, which controls at will the commercial interest, as well as each of the navigable waters of that State.

Every effort was made in San Francisco to prevent the expedition starting upon its mission. Insurance companies lent their aid by refusing to grant a policy of insurance upon the steamers, schooner, and cargo going to the mouth of the river, after agreeing to insure upon the same terms as they had other vessels going to the same destination. Arriving at the mouth of the river without insurance, this opposition manifested itself in a more formidable manner to prevent the purpose of demonstrating the navigation of this highway, so national in its character. At this time there was a bill drawn up to secure from Congress an appropriation of each alternate section of the most valuable mineral land along the river for 700 miles, and also to get the sum of $250,000 appropriated for the purpose of removing obstructions said to prevent the navigation of the river, which have subsequently been proved to have

existed only in the imagination of those seeking to practice a gigantic fraud upon the Government. In proportion as the steamer ascended the river, in that proportion were means the most revolting in their character adopted to prevent the success of the enterprise, by frequent efforts to injure her boiler, fire her cabins, destroy her machinery, and by cutting down the timber for miles along the most destitute localities, that sufficient wood might not be obtained for steam purposes.

These are but few of the efforts which were made by those interested in misrepresenting the Colorado River. In my communication in the Scientific Press, of San Francisco, and in other papers published in that city, (now in my possession,) I have given the facts in full. As we approached localities said not to be navigable, the river increased in depth from the fact that it became narrower, and was confined generally for the last 100 miles within a succession of cañons, where the rock in many places on both sides arose perpendicularly from 800 to 1,000 feet.

At these places we unexpectedly found the current to run but 2½ miles per hour, with the exception of the rapids, where the fall was from 18 inches to 4 feet, in from 120 to 400 yards. The steamer was 130 feet in length, towing a barge 136 feet, with over 100 tons of freight, and passed Explorer's Rock before we were aware of the fact. This was the same where the steamer Explorer, 54 feet long, of Lieutenant Ives's expedition, struck and returned.

I made an examination of this rock, and found it to be 2 inches under the surface, 1 foot across the top, in the shape of a cone. On each side of this there was a smooth current of water from 90 to 150 feet in breadth, the water running 2½ miles per hour, with an average depth of from 6 to 15 feet.

The most difficult rapids we encountered were Roaring Rapids, the engraving of which is given in Lieutenant Ives's report; the steamer and barge were seven minutes in ascending these; the fall was here 4 feet in 120 yards, when we entered upon a smooth sheet of water. At this point we met several persons coming down the river from Callville, who informed us that the parties who had expected the freight by the steamer had left, in consequence of having received letters from those who had opposed the enterprise from the first, informing them that the steamer was broken down and the expedition abandoned.

The steamer, barge, and cargo then descended the river to Eldorado Cañon, where Captain Trueworthy and I crossed the country to Salt Lake City, arriving in time to read the telegraphic dispatches from San Francisco confirming the foregoing unfounded letters. From this place to Salt Lake we found an excellent road, capable of being traveled at all seasons of the year. Along this are situated forty-two beautiful cities and towns, containing about 60,000 inhabitants, the inhabitants living in brick, stone, and adobe houses. Cotton and woolen mills were in successful operation, while the green fields of grain and cotton, and the fruit trees, gardens, and vineyards presented a cheerful appearance as they suddenly burst upon our view. By the success of this trip up the river it was demonstrated that goods could be delivered at Callville, 620 miles from the mouth of the river, at all seasons, from San Francisco or New York, at 4 cents per pound, or 12 cents to Salt Lake City, making a difference in favor of this route of 20 cents per pound. On our return to San Francisco, the most violent efforts were again renewed to prevent the facts respecting the success of the expedition being brought to the public. Suits were instituted against Captain Trueworthy for over one year by the Combination Navigation Company to prevent him returning to the Colorado River.

His property on the Colorado was cut adrift and sent to the ocean. All communication between there and San Francisco was prevented by taking the letters and opening and destroying them. This was done by those in the employ of the branch of the Combination Company on the river, that had for years received the patronage of the Government, while the principal, by its influence, was placing upon the statutes of California an act tending to repudiate the currency of the nation. I would not allude so minutely to these facts were it not that I desire that the real characters of those influences should be known which have operated to misrepresent this important thoroughfare.

I started from San Francisco in May 1866 for the Columbia River, Oregon, to negotiate for a steamer for the Colorado; none of the idle steamers of the Combination Company would be sold unless the party buying bind themselves not to take them on the Colorado. At Lewiston, on the Columbia, hearing that a ship had started from San Francisco with a cargo for Salt Lake City, I struck south 1,300 miles to a point on the Colorado, above Callville. Here I built a raft and descended the same 400 miles to La Paz, where I met the steamer and cargo and ascended the river to Callville, it being two feet higher than at the first trip. From this cause the rapids were less difficult to overcome.

The first trip of the steamer was in February, when the river was four inches lower than when the expedition of Ives was undertaken. One mile above Callville was a cañon, known as Big Cañon; this was represented as being the largest on the river. I passed up to the head of this, built another raft, and descended through the same to Callville.

I found no unsurmountable obstructions to its navigation. I ascertained this to be about 10 miles in length.

From an eminence at the head of the cañon I could see an open valley, 60 miles in length, extending to the northeast. From that point for 350 miles the country has been considered a *terra incognita*.

From my observation, and from information received from Indians, and from the maps and correspondence in the Historical Society of Salt Lake City, to which I had free access through the kindness of George A. Smith, secretary of the same, I am satisfied that there are none of those dangerous obstructions which have been represented by those who may have viewed them at a distance, and whose imaginary cañons and rapids for several hundred miles below had almost disappeared at the approach of the steamer. I should have ascended the river further, but my means were exhausted, the exploration of the last two years and a half being attended with great pecuniary embarrassment to Captain Trueworthy as well as myself. If an expedition should be sent out by the Government to explore the river and country above, I should be glad to be placed in a position to consummate an enterprise which has been sustained without the coöperation or assistance from any quarter. I believe that the river can be made navigable at little expense, from a point 680 miles from the mouth of the same. The grand idea of the early explorers of the western continent was a continued water line from the Atlantic to the Pacific. Subsequent investigations have proved this to be impracticable, yet the same idea may be carried out by a judicious amalgamation of railroad and water communications. By this the wealth of the richest agricultural and mineral sections of Colorado, Utah, New Mexico, Nevada, Wyoming, Montana, Idaho, and Arizona will find an outlet to the ocean, without taking into consideration the resources of coal, salt, and timber, which it must inevitably develop, or the practicability of traveling a route unobstructed by the snows of the Sierra Nevada. Some conception may be formed of the mineral wealth

along the entire length of the Colorado and its tributaries, when it is taken into consideration that more copper ore alone is taken out of a single locality of one-half mile square than all the steamers on the river can convey to the Gulf, where it commands $200 a ton. At the mouth of the Colorado there is a safe harbor, six miles in length, capable of receiving ships drawing 24 feet of water; this Captain Trueworthy and I entered the first time three years since.

From a point 25 miles above this harbor a valley extends on each side of the river from 7 to 12 miles, and running along the same for a distance of over 100 miles. The soil is remarkably rich, and capable of the highest state of cultivation. This is demonstrated by the immense yield under the imperfect system adopted by the Indians. Along the river above are also valleys, from 10 to 20 miles in length, with an abundance of timber, (cotton, willow, and muskeat;) at Buckskin Mountain, about 800 miles from the mouth of the river, there is an abundance of the finest pine on each side of the same.

The lumber used at the present time along the Colorado is brought from Oregon, and commands $200 per thousand feet.

By the opening up of the Colorado River, Government has already saved thousands of dollars in the transportation of military stores, and a fresh impetus is given to the resources of Arizona.

Three years since two steamers could do the trade; now eight are employed, and unable to do the business.

Thirty-seven ships and one ocean steamer have gone to the mouth of the river within six months, while the trade of San Francisco has increased within the same time over one million and a half.

These are but a few of the results following the enterprise of navigating the Colorado. Since its inauguration, every obstacle which power or money could bring into requisition has been brought to bear to defeat its success, and to misrepresent the most important river flowing into the Pacific Ocean.

I feel that it is impossible for me to do justice to the important subject to which I have called your attention. I am satisfied, if another exploration is ordered, that it will have the grand result of proving the misrepresented stream to be the central route which is to connect us more firmly in the bonds of common nationality, and of reflecting honor upon your administration.

Feeling assured that you will give this subject the consideration it demands, I have the honor to be, very respectfully,

SAMUEL ADAMS.

Hon. E. M. STANTON,
Secretary of War.

CONCURRENT RESOLUTIONS tendering thanks to Hon. Samuel Adams and Captain Thomas Trueworthy.

Resolved by the House of Representatives, (the council concurring,) That the thanks of this legislature are due and hereby tendered to Hon. Samuel Adams and Captain Thomas Trueworthy for their untiring energy and indomitable enterprise as displayed by them in opening up the navigation of the Colorado River, the great natural thoroughfare of Arizona and Utah Territories.

Resolved further, That these resolutions be spread upon the records of this house, and that the same be printed in the Arizona Miner.

JAMES S. GILES,
Speaker of House of Representatives.
HENRY A. BIGELOW,
President of the Council.

A true copy of the original on file in my office.

HENRY W. FLEURY,
Assistant Secretary of the Territory.

Petition of Samuel Adams, praying compensation for services rendered and expenses incurred in the exploration of the Colorado River of the West, its tributaries, and the country adjacent thereto.

To the Senate and House of Representatives of the United States of America:

Your petitioner, Samuel Adams, would respectfully state that he has been engaged in the exploration of the Colorado River of the West, its tributaries, and the country adjacent thereto, during the past five years and a half; that in the years 1864, 1865, and 1866 he made his first explorations, and, at the wish of Hon. E. M. Stanton, then Secretary of War, embodied the facts in a report to the War Department, and at the wish of said Secretary of War made an estimate of what was necessary for a further prosecution of said exploration in descending and ascending the said stream; and that he also gave, at the request of the Commissioner of the Land Office, information of the routes, settlements, and towns for a distance of four hundred and ten miles, from the Colorado River to Salt Lake City, and by him was marked upon his published maps. And your petitioner further states that, at the wish and order of said Secretary of War, he went to the Pacific coast and prosecuted the exploration for a distance of seven hundred and twenty miles from the mouth of the Colorado River, and from that Point crossed to the main divide of the Rocky Mountains in the Territory of Colorado, organized an expedition, constructed boats, furnished the party with provisions, arms, &c., and descended the waters of the Colorado River. A report of which, together with that of the river and country from its mouth, is embodied in the report which I have the honor to submit to your honorable bodies. And your petitioner further states that, in consequence of the appropriation made for the improvement of certain rivers not extended to the Colorado, (which the Secretary of War believed would cover the said explorations,) your petitioner up to this time has received no aid from the Government in assisting him in defraying the heavy expenses connected with proving the practical navigation of the river by steamers, and in the construction of boats, arming, hiring, and providing with provisions the parties connected with the prosecution of said explorations. And your petitioner would respectfully pray that the amount claimed in his bill be paid to him in full for his time, labor, and expense incurred in the explorations contained in the report he has the honor to respectfully submit for your consideration.

SAMUEL ADAMS.

WASHINGTON, D. C., *December* 13, 1869.

REPORT OF CAPTAIN SAMUEL ADAMS TO THE WAR DEPARTMENT.

EXPLORATION OF THE COLORADO RIVER OF THE WEST AND ITS TRIBUTARIES—A WONDERFUL COUNTRY OPENED UP—DISCOVERY OF ANCIENT RUINS, CITIES, CANALS, ABANDONED MINES, ETC.—VALLEYS OF WILD WHEAT, OATS, BARLEY, RYE, AND CLOVER—AN EXTENT OF COUNTRY SUFFICIENT FOR THREE STATES—THE CAÑONS OF THE UPPER AND LOWER COLORADO—THE SCENERY GRANDLY PICTURESQUE—BEAUTIFUL PARKS AND VALLEYS—THE CLIMATE, SOIL, AND GENERAL CAPACITY OF THIS WONDERFUL REGION.

WASHINGTON, D. C., *November* 1, 1869.

SIR: I herewith transmit to you my report respecting the exploring expedition in which I have recently been engaged, the object of this being to descend the Blue River to the Grand, and from thence to the mouth of the Colorado River of the West to the head of the Gulf of California. In my report to Hon. E. M. Stanton, then Secretary of War, made over two years since, respecting the commercial importance of this neg-

lected and misrepresented stream, as well as the mineral and agricultural resources of the almost unknown country through which it passes, I took occasion then to state what were my views; also, respecting the territory and river above the point to which I had ascended, which was about six hundred and sixty-five miles from the mouth of the Colorado River.

Since making that report, I have had favorable opportunities, from personal observations, to see the country of the Grand and Green Rivers and their tributaries. From this observation I have been strengthened in my faith in the statements embodied in that report.

About four months since I went to Breckenridge, which is about eight miles from the main divide or summit of the Rocky Mountains, organized an expedition of eleven men, with four boats constructed upon the ground, the largest of which was twenty-two feet in length. The limited time I had to construct these, the quality of the lumber, the capacity of the mill for sawing, and the rapid falling of the water in the river, prevented me building the boats in every respect as I could have desired. On the 12th of July, with two of my boats, manned by three others besides myself, we started for our destination upon the waters of the Blue. The other two boats, containing provisions, arms, &c., I sent by teams, to a point twelve miles below. At two o'clock we parted with the hospitable citizens of Summit County, Colorado Territory, who had, from the first, manifested the greatest solicitude in the success of our expedition, having for its object a more intimate connection with the "Terra Incognita" West. For the first twelve miles the current of the Blue was rapid, the descent being from seventy to one hundred and twenty feet per mile. The average breadth was forty yards; depth about two feet. The course of the river was nearly north. The view we had of the beautiful park through which the stream was wending its way—the snowy range of the mountains—the timber belts, green grass, and sparkling waterfalls, reflecting the beams of the sun—was peculiarly grand and imposing.

July 13.—This day had ammunition, salt, matches, &c., distributed on the four boats, to guard against the loss of any of these in case of accident to one of the boats. At the distance of four miles from our starting point we reached the point where Swan River empties into the Blue from the right bank. The volume of water in this, as well as that of the Snake, six miles below, and that of Ten Mile, nearly opposite, being each about the same as that of the Blue River, the pure clear water coming from these soon partook of the red color of the waters of the Blue, occasioned by the numerous extensive placer-mining operations above, the principal of which were forty-two hydraulic mines. Here, on the western slope of the Rocky Mountains, in the furthest county west of Colorado Territory, more gold is taken from the placer mines than from the balance of the counties of the Territory.

July 14.—Left camp; ran down the river with the four boats, all performing admirably. The stream being so rapid, it became necessary for the boats, to prevent coming into collision, to run at a distance of several hundred yards apart, and even with this precaution several accidents occurred, and a number of our party were thrown into the stream. This afternoon our largest boat, manned by Messrs. Twible and O'Conner, was leading; my boat, with maps, instruments, papers, &c., in charge of Mr. Day and myself, followed the other two boats, being at proper distances apart. The first boat failing to give us warning in time of the dangerous cañon we were approaching, we could not check the headway of my boat, and on turning the bend in the river, our real danger burst upon us, as we saw, for the first time, the white, foaming water dashing for one mile ahead of us. I called upon Mr. Day to assist me in holding our boat straight in the current. Hardly had he complied before our boat came crashing against a rock; this threw him out into the current, where he was washed upon a rock or boulder below. The boat then swung, and was driven rapidly upon a succession of rocks; the end was knocked out and she filled with water. All my papers, instruments, and maps were lost, (together with letters from the late Hon. Thaddeus Stevens, Hon. E. M. Stanton, and General B. F. Butler, who had expressed much interest in the success of the expedition and the development of the resources of the great West.) I succeeded in catching one end of the bow-line as I sank below the surface; this was carried under a rock, and I succeeded in holding the boat quartering across the stream. I remained here two hours, when a rope was tied to my person and I was enabled to get to the opposite shore. Looking up this deluge of water, upon each side of which the walls of the cañon arose one thousand feet, I saw my first boat sixty yards above completely swamped, and my third boat one hundred yards above this, in the same condition. The roar of water made it impossible for us to make ourselves understood. The fourth boat being warned in time, did not enter the cañon. I found the fall of water for one mile was two hundred feet.

July 15, 16, 17.—Repaired the injuries done our boats, packed provisions, &c., down the cañon, and let the empty boats down with a line a distance of two miles.

July 18.—Entered Pacific Park, so called from the beautiful valley which suddenly burst upon our view after emerging from this cataract of water. This day I sent one of the party back to the summit of the mountains for additional instruments, papers,

and medicine; these were promptly furnished by Mr. W. P. Pollock and Dr. A. D. Beven; these gentlemen, as well as Messrs. Mann, Mumford, Barnard, Carmen, Donnelly, Silverthorn, Clarke, and others, had assisted and manifested great solicitude in the object of the expedition. The high walls of this cañon, named by us Rocky Cañon, were brought out in bold contrast to the open valley through which, for eighteen miles, we had passed. About the center of this cañon, on the left side, Fall Creek enters; this is a beautiful stream, from which we succeeded in catching a number of the finest trout.

July 19 *and* 20.—Changed our dampened flour into other sacks; cleaned our revolvers and rifles.

July 21.—Loaded our boats and started down the river; after running one-quarter of a mile our fourth boat struck a rock and was broken in two in the center; lost portion of our provisions; was compelled to leave the boat a complete wreck.

July 22.—Our party was much worn out with the excessive labor we had undergone, and much reluctance to go on was shown by a portion of the men; the argument used by myself, that the heavy falls we passed in coming through Rocky Cañon, was the strongest evidence of fewer below, and that soon we would come to less falls in descending the river below, had no effect upon their excited imaginations, and five of my men left, leaving our diminished party to the dangers from the Indians and the falls; this reduced our party to six persons, to wit, Daniel Twible, James Lillis, George N. Day, M. Waddle, and W. Lovell. This day we put boats down by line two and a half miles. Here, for the first time, we found growing spontaneously wild oats, timothy, and clover. The valley here extended twenty miles.

July 23.—In consequence of the reduction of our force, and sickness, I was compelled to take charge of my boat alone; this was swamped twice by running under a fallen tree, and by being dashed against the rocks below the upper end of Cave Cañon, (so called from a natural cave forty feet wide at the left entrance.) The river here was fifty feet in breadth, the depth twenty-two feet. The walls of this cañon on each side arose from nine hundred to one thousand four hundred feet. My boat was so much injured by the late accidents that I was compelled to abandon it one mile from the mouth. This cañon was five miles and a half in length. At each accident to our boats we lost tools and provisions; the water penetrating our flour, we were compelled to change it into other sacks—ten times in the last eight days. Such was the rocky character of the river, that the lower edges of the sides of my boat were so much worn that I was compelled to cut these down twice since starting. The water falling rapidly, made it more difficult to run over the rocks. This afternoon at 2 o'clock, seven miles from Grand River, water running three and a half miles per hour; this was the only place for sixty miles where we found half a mile of smooth water; the fall of water up to this time averaging seventy-five feet to the mile. This smooth surface continued until we entered the Grand River in the Middle Park. This park was over thirty miles in length, covered with the finest grass; the depth of the soil was from six to fifteen feet. The Grand River was here one hundred and forty yards in width. Wild geese and ducks were found in abundance; the thermometer was from eighty-five to ninety degrees; and the fall of water, from the place of starting to the junction of the Blue and Grand Rivers, was over four thousand feet. In passing through the succession of spurs and cañons since leaving the summit, we found at each end of the latter the finest grass, and the pine timber about two feet in diameter. The direction of the Blue for the first twelve miles after starting, was nearly north; the next twelve miles north-northwest; from there to the junction of the Grand, northwest.

July 30.—Started down the Grand River with our two remaining boats; ran four miles southwest to the Grand Cañon of the Grand River; encamped at the left entrance of the same. At our sudden approach in the boats the wild geese and deer started in affright down each side of the river directly for the entrance to the cañon, where we killed a number of each. This afternoon I ascended the height at the entrance of this cañon, looking to the northeast from a point eight hundred feet above the river. A beautiful panorama was extended before me, the clear water of the Grand, like a thread of silver, winding its way through the wide valley, which must soon be the abode of civilization. Struck with the beauty of the scenery, I this evening ascended a point above, the great chain of mountains far in the distance rising higher and still higher toward the snowy range, while Mount Lincoln, towering far above these, bathed in the brilliant moonlight, was superlatively magnificent.

July 31.—Messrs. Twible and Lillis took letters and papers to the Hot Springs, thirty miles, this being the frontier trading post of the Territory.

August 1.—This day passed in taking down notes of the expedition, and in putting our fire-arms in order, these having been, with my notes and provisions, constantly in the water for the last fifteen days.

August 2.—Sabbath. Dried our cartridges, provisions, and blankets in the sun, and awaited the return of the parties taking our letters.

August 3.—Started into the Grand Cañon of the Grand River with two boats. The entrance to this was fifty feet in breadth; water very swift and deep, the first fall being

almost six feet perpendicular a few yards below the entrance; let the empty boat over this fall with a line; loaded our boats and let them down three hundred yards; came to another fall of ten feet perpendicular; packed provisions, &c., around this sixty yards below; let the empty boat down again by line. I applied my level and found the water to descend, in four hundred yards, forty-five feet. I had never, in any of the deep cañons or rapids of the Colorado River, seen any so great as those of the Blue and Grand Rivers. The walls of this cañon were from nine hundred to one thousand six hundred feet high. After dinner one of our boats, in which were Messrs. Lillis and Lovell, in descending the rapids around an abrupt angle, was struck by the force of the current and dashed against the rock-bound shore. The boat was filled with water and much injured. This accident was a severe one to us, as we lost 100 pounds of bacon, 100 pounds of flour, 1 saw, a bake-oven, 2 canteens of salt, and 35 pounds of coffee, besides other necessary articles that could not be replaced. We were now, with six men, reduced to 150 pounds of damaged flour, 20 pounds of bacon, 12 pounds of coffee, and 8 pounds of salt. Those having charge of the wrecked boat succeeded in hauling her out on land. To these I threw a stone, which was attached to a silk fishing line; this was tied to our smallest boat line, and this again to the larger one, and by the latter our boat was swung across the rapid current and prevented from sharing the fate of the other. The width of the river here was one hundred yards, and of great depth. The walls of this cañon presented a different appearance from those of the Colorado River; the latter were destitute of vegetation, while here a few gooseberries, raspberries, currant bushes, cedar, and pine relieved the sterile appearance of this solitude. No precautions were taken to guard against Indians, as in front of us stood three giant sentinels a thousand feet in height guarding the entrance to this gloomy and narrow pass.

August 4.—This day repaired injured boats; made tar for pitching; dropped down stream three hundred yards with much difficulty; found sufficient level ground upon which to sleep. The fall of water was forty-eight feet in six hundred yards; heat in the sun, 95 degrees.

August 5.—Dropped our boats three hundred and fifty yards to the head of the greatest fall we had yet seen. I went down on the left side of the cañon four hundred yards to ascertain if it were possible to take the boats over the rapids, and to get a better view of the falls below. I ascended the steep sides of the cañon eight hundred feet. Looking down I could see the foaming water dashing through the narrow pass, with no apparent method in its motion. The appearance of the river to the southwest was favorable. Preparing to descend, I saw our party waving their hats. I soon ascertained the cause of all this to originate from the important fact that they had just found, lodged upon the rocks, forty pounds of our lost bacon. This was fortunate for us, as we were reduced to but a few rations of this indispensable article. Finding it impossible to take the boats down on that side, by land or water, we crossed the stream above the rapids and packed our provisions seven hundred yards below, over the roughest and most dangerous portage yet passed. We could make but two trips a day. The boots of my men were completely worn out, and several men were prostrated in consequence of the fatigue occasioned by our constant labor. We then let down our smaller empty boat by line, lifting her over the rocks below. We then started by the same process to let our largest boat down. She swung out into the current, filled with water, was held struggling an hour in the mad element, when the line parted and our best and largest boat disappeared forever. By this accident we were reduced to one boat; almost everything necessary for the trip had been lost. Here I gave the box in which I had carried my instruments to the waves. We divested ourselves of almost everything of weight, and prepared to try our fortunes in the last boat. The heat was now 110 degrees in the sun, which produced a great contrast to the cold water of the river. Immediately below us, southwest, in a direct course of the river, rose a mountain in the shape of a dome, nine hundred feet high, as if standing upon its broad base to dam up this boiling current of water. I called this "Dome Mountain." The fall of water in eight hundred yards was eighty-two feet. I found it impossible to pack provisions up the mountain. We were four days in going three-quarters of a mile.

August 6.—Made three trips with our boat in taking party and provisions to the opposite shore. The timber and blocks in the stream I found to be about as much worn as those I had seen in the Colorado River three years before. This, to my mind, was an additional evidence that the cause of this originated from obstructions above, and not from passing through the exaggerated cañons below, which have been so brilliantly represented by those who have viewed them at a magnificent distance.

August 7.—River very swift. Fall of water one hundred and eighty feet to the mile. Made to-day four different portages; ran half a mile, and let the empty boat down by a line through the swift current, as it was impossible to take her by land. She swung out into the current, and in a few moments was dashed upon the rocks below, a total wreck. Our first boat was lost at the mouth of Rocky Cañon; the second one mile from the mouth of Cave Cañon: the third one mile from the head of Grand Cañon, and the fourth one mile below this.

August 8, 9, *and* 10—Found us without a boat, almost destitute of salt, and reduced to fifteen rations of flour, bacon, and coffee; our cooking utensils and all our lines and building tools gone, except one ax and a hatchet. Three of our party concluded to leave and return. One of these, Mr. Waddle, had been sick; the other, Mr. G. N. Day, was suffering from excessive exposure. In justice to both, I will say that they had been faithful from the first, and I am convinced that it was only from the force of circumstances they concluded to return. Our party was now reduced to three. Messrs. Twible and Lillis consented to accompany me. The provisions we had at this time, although much damaged, would have lasted us two weeks. We here constructed a small raft, three feet by six. Upon this we dropped by line our provisions fifty yards below. The perpendicular rocks upon each side made it impossible for us to get our things down in any other manner. We sifted our flour through a piece of mosquito bar, and ascertained that we had thirty pounds, six pounds of coffee, and twelve pounds of bacon. I felt convinced, from the favorable appearance of the country to the southwest, and the nature of the rapids, that we could in a few days make more rapid progress. We then packed our provisions, &c., down the river three miles, over the most difficult places I had ever traveled. On our way down we found the blankets, shirts, coats, and lead which had been thrown away by the parties leaving us two days before.

August 11.—Built a cedar raft, five by sixteen feet, and upon this we took passage, ran down the river thirty miles, passing through wild oats, barley, rye, timothy, clover, and wheat, which extended on both sides; the latter we found over six feet in height. Here and there we saw small patches of oak and crab-apple trees. The currants and gooseberries and grain were much further advanced than we would have supposed; the cedar, cottonwood, and pine increasing in size, although upon the summits of the mountains and hills more evidence was seen of volcanic eruption than in the section of the country through which we had passed. When we came to Rapid Cañon, I ascended the side of the same about nine hundred feet; here I found an excellent quality of white marble, and a number of extensive quartz leads. The view I had of the country southwest was becoming much more favorable. I expressed confidence in our raft going safely through the swift current. Mr. Twible took our blankets, matches, soda, and medicines by land over the mountain to a point three miles below.

The hardships we had undergone in packing provisions and repairing our boats made it almost compulsory upon us to make the trial. Mr. Lillis and myself started on the raft to the head of the cañon—it swung around in an eddy as if reluctant to go down the current. We pushed her out, and in a moment she shot like an arrow down the rapid descent. We both grasped the cross-pieces on the raft to which our provisions were lashed; she sunk four feet under the surface, but rose again in the distance of eighty yards, when, in turning an abrupt angle in the river, she struck and parted. Here we lost a large portion of our provisions. We then took the raft apart, and by swinging three of the logs below formed another, and succeeded in getting our arms and what provisions we had, ashore. We ascertained we now had but eight days' provisions. Here we constructed a third raft, and proceeded twenty miles, the mountains in the southwest becoming less, when we passed through a chain of cañons, the last of which was the most difficult. In this our raft again struck, where we lost all our salt, all our cooking utensils, except one frying pan, and most of our flour and bacon. There was less elasticity to this than the Tulie rafts upon which I passed through the cañons of the Lower Colorado, and in striking with much force against the rocks the material of the cedar raft would part.

August 12, 13, *and* 14.—Built another raft, and descended forty miles further, when again, in turning an angle in the river, she struck a rock, and all our provisions, except five days' rations of flour and bacon, were lost. We were almost worn out by the excessive fatigue and constant exposure in the cold water. I am satisfied had it not been for the healthy climate that all of us would have suffered from continued exposure. We had now descended over six thousand feet. One of the main objects of the expedition had been accomplished, which was to ascertain where was the principal fall of water between the point where we started on the mountains, ten thousand feet above the sea, and the Pacific coast. I felt satisfied that nothing more could be done by using further arguments to go on; and with the greatest reluctance we concluded to cross the country by land to Delaware Flats, at the base of the Rocky Mountains. I was satisfied that we had gone over the most difficult portion of our route. Three years before I stood at the head of the Black or Big Cañon of the Colorado River, and looking northeast I could see a valley extending seventy-five miles in length. This was about one hundred miles above where I left the steamer Esmeralda, which had made two successful trips under the command of Captains Trueworthy and Rogers, (she having succeeded in going at a high and low stage of the river with a barge carrying one hundred and seventy-five tons of freight,) forty miles above where the Government steamer Explorer, fifty-four feet long, had struck, and returned.

I now stood at a point above, and looking southwest could see the narrow territory which separated us. I confess that it was with no ordinary feelings that I was compelled to yield to the force of circumstances.

Before starting from the mountains, on the 12th day of July, I expressed it as my opinion, in a letter to Hon. Horace Greeley, and Judge Agnew, of the Supreme Court of Pennsylvania, that I expected to find the greatest difficulty in descending the river for the first three hundred and fifty miles. I was not then prepared to find so many falls within the distance we had gone. The summit of Mount Lincoln, twelve miles from where we started on the expedition, is fourteen thousand six hundred feet above the level of the sea. From the point where we descended the river, I do not think there is over four feet fall to the mile, to the mouth of the river in the Gulf of California, estimating the fall of the river we had already descended at about six thousand feet; a strong argument to establish my published statements, over two years before, respecting the country and river, which have from the first been the victim of the wild and extravagant statements of professional letter-writers, who have never seen either, and who act as if they were licensed to give unsubstantial statements to the public, which would at once be ruled out if sought to be introduced in the trial of a petty suit. It is not my purpose here to enter into the motives, or to dwell upon the character, of that large class of presumptive men whose vocation it has been to write magnificent descriptions of that they pretend to know; sooner or later these will find their level, and a discriminating public will judge them and their productions.

August 15.—Packed our rifles, revolvers, ammunition, blankets, and limited rations, and started across the country, and arrived at the base of Mount Lincoln after ten days of wearisome traveling. We found an excellent route for a wagon-road from here to the section of territory (distant three hundred miles) where the people of Western Colorado are petitioning to have a military post established. When this is done, a large population, who are anxiously waiting, will rapidly settle up this inviting district. I ascended to the summit of Mount Lincoln. Here, high up in the clouds, surrounded by snow, fourteen thousand six hundred feet above the level of the sea, three great rivers have a common fountain-head—the Platte, Arkansas, and Colorado—the first two to wend their way to the heaving bosom of the Atlantic, and the other (as if conscious of her power) alone carries her water to the placid Pacific. Up the Arkansas, through the mountains, the grade for a railroad north is so even as scarcely to be perceptible. The construction of this would be attended with little expense, as the material is already on the ground.

I have thus, in an imperfect manner, endeavored to give you a few of the facts connected with our descent of the river, as I did, over two years since, (in ascending the same,) to Hon. E. M. Stanton, then Secretary of War. In doing this, I am prepared to find again, as I have before, those who have expended no time, incurred none of the hardships of frontier life, and who have given no investigation to the important subject to which I have respectfully called your attention, who exclaim at once, for the first time, that they are entitled to receive assistance from Government toward carrying out the objects of this expedition. No personal considerations of this kind have or shall prevent me giving you the result of my individual explorations. A singular fatality has from the first been connected with the history of the Colorado River. Other streams of one-fourth its length, and vastly inferior in importance, are known to the nation, while this centrally located river, whose waters run over two thousand miles, can hardly have a passing notice. The letters written respecting it, and the continued effort made by a formidable coalition of corporations (for selfish purposes) to crush out the individual enterprise of proving its national importance, have all been of that revolting character as to do her the most flagrant injustice. The Colorado must be, emphatically, to the Pacific coast what the Mississippi is to the Atlantic. The building timber and ties for the construction of the railroad crossing the continent (now completed) have been carried upon one of her tributaries; and one of her grand purposes will not be completed until the material for the construction of the southern line is borne upon her surface.

Permit me to allude to a few facts. Explorer's Rock, where the steamer Explorer struck and returned, has been represented as the head of navigation, and that it was absolutely necessary to remove the same before steamers could ascend higher. The steamer Esmeralda, one hundred and twenty-five feet in length, with a barge one hundred and thirty-six feet in length in tow, carrying one hundred and seventy-five tons of freight, passed this place when the river was at a higher and lower stage than when the Explorer struck. On each side of this rock there was a smooth current of water, running about three miles per hour, the breadth of the river on each side from forty to one hundred feet, with an average depth of from five to fifteen feet. This was the commencement of the Big or Black Cañon, described by Lieutenant Ives as having from twenty-five to thirty rapids, and extending twenty-five miles in length, the principal of which was Roaring Rapids. An engraving of this and the cañon is given in his report. The steamer Esmeralda, laboring under every disadvantage, was, with her barge, just seven minutes in making her first trip, and five minutes the second trip, up Roaring Rapids. The fall of water here was four feet and a half in one hundred and forty yards. The capstan was worked the first time by hand, the second by steam. The capacity of the boilers of the Esmeralda was one hundred and twenty pounds of

steam; these boilers had been so much injured by those seeking the destruction of the boat, that she generally carried but seventy-five pounds. It was a premeditated plan for the past four years to prevent the facts being brought to the notice of the Government respecting the nature of the river, as an appropriation was sought to be obtained from Congress to improve its navigation where it was demonstrated that it was not necessary. I subsequently, as I did before the steamer ascended through this cañon, descended it upon a small raft. The river was high, and in passing over Roaring Rapids they were hardly perceptible. As a still stronger argument to meet the allegations of those doing injustice to the current in this cañon, I would state that barges have been making successive trips in passing up and down for the last three years, one hundred miles above Fort Mojave, to which point the steamers of the company controlling the river come. These barges, manned by three men, when the wind is fair, can make from fifteen to thirty miles per day against the current; the water is deep and the channel permanent. It might also be inferred from the report of Hon. J. Ross Browne, contained in Harper's Magazine, that the river was not navigable here, and that the expedition going to the Upper Colorado was intended for speculative purposes. Did he not directly contradict himself in his statements respecting this matter in his history of the mineral resources of the Pacific? I might mention numerous other instances of equally popular writers, who have perhaps unconsciously given the public a wrong impression respecting the cañons of the Colorado River, some even going so far as to state that there is one cañon alone extending three hundred miles in length. The publicity given to these, and the confidence placed in them, show what great injustice can be done in a few moments to a country, which takes years to disprove. In the report of Hon. J. Ross Browne, so extensively circulated, the author states, in referring to the statement that the trade of the Colorado would pay better than the Sacramento, that the assertion should require something more than the unsupported statements of interested parties. This is a reflection as unwarranted as it is unjust. The parties ascending the Colorado constantly asserted in public meetings and through the press that no appropriation was necessary to improve the river above. The knowledge obtained by the author of that work was not from his personal observation, but was based entirely upon the reports of those connected with the Combination Navigation Company, who themselves had never been up the river, and who alone sought to obtain an unjust appropriation from the General Government. I think I may not be charged with entertaining a violent presumption in stating that, as the facts are brought before the public, they cannot have much hesitancy in deciding who are interested parties When the character and motives of those seeking to monopolize and misrepresent the Colorado are brought to light, some idea may be had of the unequal contest and pecuniary sacrifice which has attended the efforts of those seeking to prove its practicability. Personal matters are uninteresting. The apology I have to offer for speaking somewhat at length upon this subject is its great commercial importance, and the necessity of the Colorado in developing a vast extent of territory of more intrinsic value to the General Government than ten Russian purchases, the grandeur of whose destiny must soon be made evident, if those arteries which lead from and through it meet with that consideration which they so richly deserve. So great an interest was manifested by Hon. Thaddeus Stevens that he said he considered it a "national disgrace that the nation was almost as ignorant of the territory upon the Upper Colorado as it is of the center of Africa." As an additional argument for the exploration of the country west and southwest from where we started to descend the river, I would say that in Summit County is a large population of the most intelligent, industrious, and enterprising citizens, who are by snow completely cut off from the balance of the Territory six months in the year. These have no protection, outside of the rich placer and quartz mining districts, from the Indians, and consequently cannot improve the rich soil in their vicinities. Here are the most successful placer-mining operations in the mountains.

At the mouth of the Colorado River there is a good harbor, from which nine steamers take freight for the upper country. This harbor, Captain Trueworthy, Mr. Rogers, and myself accidentally discovered, about four years since, in running along the mouth of the Gulf. We entered what we supposed an inlet from the same. Going up this, we ascertained the water to become fresher. Encouraged further, we heard a roar of water which we soon discovered to be a fall of fresh water eight feet perpendicular. We remained here but a short time, when the tide coming in, (which rises there twenty-five feet,) we were carried over the falls, and entered a stream of fresh water coming from the Colorado. This had at some time been the main outlet from the river. We named the harbor Trueworthy Harbor. This is now more generally known as Isabella Harbor. Such was the limited knowledge of the steamboat company which had for ten years navigated the Colorado, that up to that time its locality was not known. This company had continued to carry freight upon their small steamers at all seasons without barges; the consequence was that, when the depth of the water was two feet and a half in some places, (as it has been a few weeks in the year,) there were delays in descending. Through Captain Trueworthy a different system of navigation was introduced, (since adopted by all the steamers,) by which the steamboats can take up and

down the river five times the amount of freight with the same power, and making the trip in less time than the imperfect mode before adopted. For the first one hundred and fifteen miles from the mouth of the Colorado River there is a very rich valley from five to fifteen miles in breadth. Here is an abundance of cottonwood, willow, ash, and mesquit; the latter produces too great a heat for the grate-bars of steam boilers, unless tempered with cottonwood. The same quality of timber extends over five hundred miles up the river. The Cocopah and Yuma Indians here raise wheat, barley, corn, and melons: generally planting as the water recedes. Rice and sugar could be raised with the most profitable results. This valley is equal, if not superior, to that of the Sacramento, California. They differ, however, in this respect: the soil of the first slopes back gradually to the base of the mountains, while the banks of the other are higher immediately along the river. The fish in the harbor and gulf of California are of the finest quality. In four hours Captain Trueworthy and myself harpooned nineteen sea-bass, averaging one hundred and forty-nine pounds each. The pearl fisheries of the Gulf were a source of great revenue to Spain; but since the revolution of Mexico these have been abandoned. Above Fort Yuma, one hundred and forty miles from the mouth of the river, to a point four hundred and thirty miles, numerous unconnected rich valleys are found; these are mostly occupied by the Mojave, Chimawava, and Pah-Ute Indians. These Indians raise grain, melons, &c., and cut wood for the steamers. At the Mojave Valley, three hundred and fifty miles from the mouth of the river, there is a very rich valley extending over thirty miles in length. Here Colonel Dent, who has had charge of the Indian agency, has succeeded in turning the water from the river upon the reservation. The amount of work he has done by the labor of the Indians speaks very much in favor of his enterprise, and the practical system he has so successfully inaugurated toward advancing the welfare of the tribe over whom he acts. He has had much opposition from those who sought to monopolize the trade of the Indians. This opposition, so common in Arizona, is the strongest evidence in favor of any practical movement. Here honesty in almost every Government transaction is an exception.

For the distance of six hundred and twenty miles from the Gulf of California, the Colorado River is navigable for steamers and barges at all seasons of the year. This has been practically demonstrated by Captain Trueworthy, who was prevailed upon by me to bring his steamer to the Colorado over four years since. A few months subsequent to that time, I descended the Colorado River on a small raft from Callville, for a distance of three hundred miles, and succeeded in getting the same steamer, Esmeralda, Captain Rogers, to ascend the river with her barge and freight to Callville, both trips having been made at a high and low stage of water.

A partial report of our trip, depth of channel, country, &c., along the river, is given in the History of the Mineral Resources of the United States, page 462, by G. W. Gilmor, who accompanied the expedition; also, the statement of Captain Rogers. The fall of water at Roaring Rapids I found by measurement to be four and one-half feet.

Every obstacle was placed in the way of demonstrating the importance of the navigation of the river by a coalition of corporations, whose object was to continue to control the trade and to obtain from the General Government a large appropriation to improve and remove from the river obstructions which did not exist. So great was this hostility that it became necessary to watch the steamer Esmeralda night and day to prevent her being destroyed. The bullet and the knife were brought into requisition to prevent the consummation of an enterprise so important to the development of the country. It was the fixed intention from the first that this never should be undertaken, from the moment it was determined to send a steamer to that river, until its commercial importance was fully established; there was a continued hostility to its objects as bitter as it was unjustifiable. The insurance companies who had agreed to grant a policy to the steamer going to the mouth of the Colorado River, (upon the same terms as given to other vessels going to the same port,) bent before the pressure—broke their faith—and, as a consequence, the steamer was compelled to start out upon the ocean without a dollar's insurance; but by the propitious gales of heaven was taken in safety to her destination. Even here the hostility so early inaugurated, instead of being abated, increased in intensity, and it was necessary to guard the vessel night and day to prevent her destruction. When she had reached a point with her barge and cargo far above where the steamers of the old line had succeeded in navigating, the timber upon the banks was cut down and destroyed to prevent the steamer getting fuel to reach her destination at Callville. Subsequently, arriving within a few miles of this place, six hundred and twenty miles from the mouth of the river, we ascertained that the settlers who had at Callville been anxiously awaiting the arrival of the steamer, barge, and cargo, had left and returned into the interior, in consequence of false letters having been written to them from parties connected with the Combination Company, stating that the steamer was broken down, and the expedition abandoned. There was no further object to be accomplished at that time, and the steamer returned to El Dorado Cañon. We here left her and crossed the country to Salt Lake City—about four hundred miles—passing as we went the empty wagons of those returning from Callville, arriving at Salt Lake City in time to read telegraphic dispatches from San Francisco, corroborating

the unfounded statements contained in the letters. The resolutions of the citizens of that place condemning this double act of duplicity I regret losing with my other papers in the cañons of the Grand River. It was true that the complete success of this expedition, under the most unfavorable circumstances, had caused a spasmodic effort upon the part of a part of the dependent commercial men of San Francisco to improve the opportunity of increasing their trade; but seeing the power of the gigantic corporation which towered in their midst, and the ominous shadow inseparably connected with it, they shrank back in fear to the tread-mill to renew their accustomed round. The legislature of Arizona being fully conversant with the facts, gave unanimously a vote of thanks to Captain Trueworthy and myself. Even this act of consideration was sought to be suppressed by the action of the governor of the Territory. Not satisfied with the continued hostility to the object of the expedition, an effort was made here at the capital of the nation to prevent the insertion of this report in the columns of a prominent newspaper, which has from the first manifested a great interest in the development of our Western country. I mention these facts, not to recur to personal matters, but to give some of the prominent reasons to show why the Colorado River and country has been so little understood, and also the extended influence and dangerous character of that coalition of corporations upon the Pacific coast, whose soil is profaned by their despotic march, whose people groan under its dictatorial power, and whose grand destiny is sought to be impeded by a centralization of dangerous influences without a parallel in the history of any State of the Union. I am warranted in saying that such has been the character of these that had it not been for the superior climate, geographical position, soil and energy of her people, California to-day would have had her vitality crushed out by a powerful coalition of these. No stronger evidence of their superlative selfishness can be given than the fact (patent to all) that from the center of this circle has originated the greatest opposition to the completion of the railroad now spanning the continent. Failing signally in their insane effort before the march of progress and destiny, they have reserved their forces to stop if possible the opening up of other routes north and south, that the development of our own continent should be secondary to that of an oriental power, or the patch of islands which cluster upon the sea. The revolting means adopted by these to gain additional power in our extreme Western States and Territories, and the vindictive hatred with which they followed their victims, presented such a spectacle, that in the language of Hon. E. M. Stanton, deceased, (which now has a double significance, since his death,) "that such characteristics are those of tyrants, and their efforts to suppress the facts are the strongest evidence of their intrinsic value to the nation." So powerful was this influence, that after the navigation of the river had been demonstrated, and the premeditated fraud exposed, a vote of thanks given to Captain Trueworthy and myself by the legislature of Arizona was sought to be suppressed by the direct action of one of the highest officials of the Territory.

I mention this not to recur to personal matters, but as an evidence of the extended influence of that coalition of power. The coalition of powers in San Francisco not being satisfied with the control of the State, left nothing undone to block up the natural avenues leading to the same, unless these avenues and the profits derived from them were monopolized by a company of which they were a part. This dangerous centralization of influences had become so formidable that the Commonwealth of California staggers under its weight, while the farmer, the representative of the dominant interest of the same, after twenty years of painful expectancy and deception, too often finds himself without an advocate or the fee simple title to the soil he cultivates. I am warranted in saying that such has been the formidable character of these, that had it not been for the superior climate, geographical position, soil, and energy of her people, California to-day would have had her vitality crushed out by a powerful coalition of these. Against a combination of all these, private individuals are compelled to contend, whether in navigating a river within the jurisdiction of that State, or in opening up natural avenues leading to the same. No stronger evidence of their superlative selfishness can be given than the fact (patent to all) that from the center of this circle has emanated the most violent hostility to the prosecution and completion of the great continental railroad now spanning the continent. Failing signally in their insane effort before the march of progress and destiny, they have reserved their forces to stop, if possible, the opening up of another route south, that the great interest of the development of our own country might become second to that of the trade of the oriental powers, or the patch of islands which cluster upon the sea. In the catalogue of these, we find no striking evidences of enlarged views of public interests or national pride. The whole system, impolitic as it has been, finds alone a parallel in their hostility to the currency of the Government and their bitter persecution of those opposing them. It is almost in vain that the people look for relief from this stupendous and encroaching power outside of the supreme power of the Government. The least hesitancy to obey the despotic mandates of one of this inquisitorial tribunal, subjects the victim to the united hostility of all. Having one grand purpose to gain, no hesitancy is shown in adopting the means for its consummation. More dangerous does this be-

come from the fact that it seeks absolute dominion over our extreme Western States and Territories under the alluring but deceptive plea of the public good. I mention these facts, as from this combination have originated all the efforts (within the last five years) to prevent the objects and purposes of the explorations (the subject-matter of this report) up to the present hour. Here are to be found corporations having millions for competition, but nothing for enterprise. The fact that the Colorado River has been so little known has cost the nation millions, and especially at a time when struggling to maiñ her nationality and the supremacy of her laws. Sixty to one hundred dollars in gold per ton for carrying Government freight from one hundred and fifty to four hundred miles, when the cost of fuel and running steamers is but little more than on the Missouri River, is enough to satisfy any corporation. At each trip a steamer can clear enough to pay her original cost.

By the introduction of competition on the river, the Government has saved thousands of dollars; but, while she has been benefited, those who have been the cause of this have suffered the loss of all their capital, in consequence of the increased hostility arrayed against them. In the language of a lately deceased distinguished statesman of Pennsylvania, "the long-continued hostility to the opening up of the Colorado, and the country through which it passes, is the strongest evidence of its importance, and that those seeking to stop the progress of public enterprise should learn, if they do not know it already, that this river and country is part of the public domain." By opening up the Colorado River a natural outlet is had for mines of unlimited extent. The timber alone must be a source of much value to the nation. Some conception can be had of its coming importance when it is understood that at Puget Sound, within twelve months, one hundred and forty-five vessels have been sent with lumber to all parts of the world—where more business is done in this line by the same number of persons engaged than in any other portion of the United States. The opening up of the Colorado River and country is of incalculable importance to the General Government, and particularly to the States of California and Nevada, and the Territories of Arizona, New Mexico, Utah, Colorado, Wyoming, Montana, and Idaho. But, from the fact that they have so long been the object of misrepresentation, none of these have scarcely realized any benefit from a proper knowledge of the true importance of that stream, for unobstructed steam navigation (without improvement) for over six hundred miles from its mouth, and for the conveyance of timber, the precious metals and coal, within the limits of our own country, and the products of the fisheries, and the islands of the sea. The demand for pine and other timber found at the headwaters of the Colorado and its tributaries is immense, without taking into consideration that which is necessary for ship-building, masts, spars, &c. Such is the quantity of timber coming down this stream, when its waters are at their height, that in many places it is buried beneath the accumulated sand, thirty feet in depth, or washed continually by the action of the tides at the Gulf of California. Yet with these unmistakable evidences of the vast quantities of timber above, as unreasonable a doubt has been long entertained respecting this self-evident fact, as the reliable steam navigation of the headwaters of this important but misrepresented river, upon whose almost unknown bosom, and through whose exaggerated cañons, eighty trips of barges and steamers have been made within the last four years, without *one moment's detention* from ice, or from high or low water. Perhaps the richest silver mines ever discovered in any country are those of White Pine, Nevada, the astonishing yield of these far exceeding that of the most celebrated of Mexico and South America. This mineral country extends to and crosses the Colorado River. As you approach that stream the timber becomes scarcer. This essential article, so necessary for the benefit of the country, as well as for the settlements in the vicinity, and the construction of the railroad now in contemplation from a point on the river to Elko, Nevada, and to Salt Lake, Utah Territory, can be brought down the Colorado. A vast extent of territory which has heretofore been considered worthless must soon prove the richest in mineral wealth as the channels leading to it are brought into requisition. It requires no statement of mine to establish the fabulous wealth of some of these districts; the practical evidence of the yield of each day's operation proves it beyond the possibility of a doubt. With such resources as are opened to the enterprise of the American people, the public debt (the terror of some) becomes a matter of almost comparative insignificance. The benefits resulting to the General Government from the development of these at the present time, though great, are but as an atom when compared to what it must inevitably be when the resources of the country are known and appreciated. From the point of starting in the Rocky Mountains to the mouth of the Colorado River, upon each side, for a distance of fifteen hundred miles, is one extended mineral and agricultural country, the boundaries of which have scarcely been penetrated. Nature appears to have been partial to this stream—for eleven hundred miles it carries the united waters of the Grand and Green Rivers, (its main tributaries;) these have their sources in the Rocky Mountains, four hundred miles apart; the country it drains embraces a vast territory, thousands of miles in extent. The Columbia River sustains the same relation to the North that the Colorado does to the center of the continent. The first must be acknowledged to be

of much commercial value to the nation; but when it is taken into consideration that it is obstructed by ice in winter, and always by the successive portages, when its steam navigation is broken, it cannot be compared with the other, having none of these disadvantages. One has been known for over a century. The illustrious names of Lewis and Clarke are as familiar as household words; while the other, further south and more centrally situated, is just commencing to attract public attention.

The beneficial results of a more intimate knowledge of this stream and country will not be confined to those expecting to live along each, but, in proportion as this river and country is opened up, in that proportion will the interest of California be promoted, and her people, for the first time, be relieved from the grasping and usurping power of those rank corporations, who have grown up almost in a single night, and who, from the unobstructed success of years, treat with impunity the rights of the people, as if these were but "the titular dignitaries of the chess-board." To the nation the navigation of this river, the original object of the expedition, is of importance. but this is but one of the benefits, among many others, which must inevitably flow from a more intimate knowledge of the extensive country which is destined soon to be the happy home of thousands, and whose long sabbath of ages will be broken by the advance of civilization. The mines of California dwindle into comparative insignificance when compared to her great agricultural resources, and it will be an auspicious day for this State (whose advancement has been so long retarded) when she shall be relieved from the mistaken policy and oppressive weight of those powers who, professing a duty to the General Government, pursue a suicidal course in the insane effort of excluding her currency from the State. I feel that I have departed from the subject-matter of my report. The apology I have to offer for speaking somewhat at length is its great importance to the commercial interest of the nation.

For the distance of six hundred and fifty miles along the Colorado River you are in constant view of the leads of gold, silver, copper, and lead. Many of these can be traced back into the mountains for miles, or hang abruptly over the banks of the same, as at Eureka district, one hundred and eighty miles from the mouth of the river. Here the silver and lead mines are worked very profitably—the supply of the latter metal being furnished for the shot-tower in San Francisco. Placer gold, silver, copper, and lead mines are found in the vicinity of "La Paz," one hundred and twenty miles above. At Williams's Fork, four hundred miles from the Gulf, thousands of tons of the richest copper have been extracted from the unlimited leads in the vicinity. Much of this has, from want of steamers, been unable to be carried to the ocean. At "Fort Mojave," five hundred miles from the mouth of the Colorado, and at Eldorado Cañon, sixty miles above, the richest mines are to be found, where the facilities for working the same profitably are not surpassed in any other section. Much of the silver and copper everywhere found on each side of the Colorado has been taken to San Francisco, Swansea, and Germany, attended with the most profitable results. When it is taken into consideration that the cost of transporting every article necessary for the use of the miners in these localities has been from twelve to fifteen cents per pound in gold, some conception can be had of the unnecessary expense in working the leads. Here, from a combination of circumstances, has been presented the strange anomaly of a people being compelled to pay the highest rates for supplies and machinery, while possessing the most advantageous facilities for getting these the cheapest.

At Eldorado Cañon, on the west bank of the Colorado River, is a rich silver district. Several of the mines are worked. The Tchatticup lode is about seven feet wide; average yield, seventy dollars per ton.

Indian Queen, Queen City, are about the same; a description of these is similar to those above and below on the river.

At Williams's Fork a great number of leads, principally of silver, copper, and lead, have been successfully worked. At the Planet mine much copper ore was taken out, yielding 74 per cent. The ore is a gray and red oxide, averaging 40 per cent., worth at San Francisco $100.

Many of these are in successful operation. The scenery of Chimawava, Mojave, Black, Long, and Painted Cañons is particularly grand. So strange and unusual is the scenery here that, in descending through these cañons, I almost doubted their existence. In that of Painted Cañon, (so called by the Indians,) at each change of position new and startling beauties were revealed. The striking resemblance to ruined castles, fortifications, and bastions was remarkable. In others, two thousand feet above the water, hang from their lofty heights huge rocks, apparently suspended, and ready, at the least breath, to come crashing to the surface below. Add to this the different strata of every color, as distinctly defined as if fresh from the hand of a master painter, and a faint conception can be had of the magnificent scenery. At the head of Painted Cañon I found a white strata of rock, extending for miles across the country. I examined this, and found it extremely light, and of the most superior quality for polishing silverware. I subjected it to an intense heat, and no impression could be produced upon it. I believe this will yet be a valuable article for commerce.

The steamer for the last forty miles passed through a continued chain of cañons, the walls in many being perpendicular. The smoke and steam ascending these made it dangerous for the boat to lie in too close proximity. At this part of the river there is no timber, that having been cut down forty miles below by parties seeking to prevent the steamers ascending the river. The supply of fuel, in consequence of this, had been about exhausted, when, landing at an opening in the rock, which arose eight hundred feet above, we ascertained it to be a cave three hundred feet in depth, and forty feet in breadth at the entrance. Here we found several hundred cords of the best quality of wood for steam purposes. This consisted of white pine, pitch pine, cedar, ash, walnut, and cottonwood, which had been washed there for ages. This wood was much worn by the action of the water and the rocks in being carried by the freshets from the country above, appearing to indicate the rough nature of the falls and the streams above. At this place the steamer and barge took on board about twenty-five cords, which enabled us to reach Callville, thirty miles above, where the freight was delivered without any damage. Here, upon the highest sides of the cañon, the day and date of the arrival of the steamer and barge was written, in letters so broad and conspicuous that all the combinations which sought to crush out the enterprise can never erase. From Callville, six hundred and twenty miles from the mouth of the river, to Salt Lake City, Utah Territory, a distance of four hundred miles, there are forty-two beautiful cities, towns, and settlements, the first being established at St. Joseph and St. Thomas, thirty miles from the Colorado. Here, by a system of irrigation, the finest wheat, cotton, and fruit are raised. In passing this chain of settlements, the traveler unexpectedly finds many neat buildings of stone, brick, and adobes, while the cotton and woolen mills, half concealed by the orchards and vineyards, add a peculiar charm to the scene.

So successful have the people everywhere been in raising the largest crops by irrigation in a desolate section, heretofore condemned, that it is of the utmost importance to the General Government that the public domain should not be granted to corporations, because it may be situated in a locality where there is not a regularity of rains. The practical experience of the past few years, and of the present, have demonstrated that the most profitable and abundant yield of grain has been produced by irrigation. Within thirty miles of Callville extensive veins of the finest salt are found seven hundred feet upon the sides of the mountains, and varies from ten to ninety feet in breadth. This is transparent, and is taken out by the pick and crowbar and powder, and is supplied to the inhabitants in the settlement, and taken to the silver mines at Pahranagat, to those at Eldorado Cañon, and to the mills along the Colorado River below. This salt mine must be of great value, as the unlimited territories of gold, silver, copper, iron, and lead in the immediate vicinity are developed. The quartz mines of this section, those along the river, and in the center of the Territory, must be to the country in their immediate locality what the placer mines on the headwaters of the Colorado and further inland in Arizona are to the surrounding country. Quartz mining requires at first more capital to operate successfully than placer. In Summit County hundreds of miles of canals or ditches wind around the mountain, these carrying so much water that two men, with hose and pipe, can do more work (with less labor) than one hundred by the old system of the pick and shovel. The quantity of mining territory here is unlimited. The average pay to each miner is from six to seventy-five dollars per day.

Above Callville, the Black or Big Cañon continues for thirteen miles. In this there is no opening leading out on either side. No vegetation is seen struggling out from its bare rocks, and no clear streams fall into it to mingle their waters in the deep chasm below, as is seen in the cañons of the Grand and the Blue. The sides of this cañon, rising from eight hundred to one thousand five hundred feet almost perpendicular, look like polished iron. As far as the eye can reach is one continued chamber, whose sides echoed back the successive strokes of our paddles, like the sound of a muffled drum or a sepulchral voice. It would seem as if nature had intended that this strange solitude should never be disturbed by the throbbings of the steam-engine or the busy bustle of commercial trade. I am satisfied that with a small appropriation steamers could ascend and descend through this cañon, and seventy miles beyond. For all practical purposes at the present time there is no necessity for this, as steamers can run at all seasons of the year to its mouth without any improvement of the falls.

Admitting, for the sake of the argument, that steamers cannot ascend the Colorado for more than six hundred and twenty miles, it does not follow that a proper knowledge of the river above will not produce great benefits to the Government, which, acting in common with other causes, must contribute to unlock the hidden resources of a vast country, larger than ten European kingdoms. No two rivers can differ so much in their appearance as the Colorado at its headwaters and that portion of it running five hundred miles from its mouth. Above, the stream is kept in its natural channel; below, in many of the unconnected valleys through which it passes, it is changeable, and becomes of a redder color as it approaches the Gulf. In entering the succession of canons through which we passed, the wildness of the scenery, the subdued lights, and the silence which reigned in some of them, conveyed the impression that we were

being carried far from the habitations of man to the inner recess of the earth. Our party of three descended through one of the deepest. During a severe storm the loud peals of thunder echoed and reëchoed through the walls of this extended pass. Our boats were dashing madly ahead at the rate of twenty miles an hour over the white foam, which became more fearful from the dim twilight, which was lit up by the glare of the lightning.

We did not know when we would reach the mouth of this cañon, when, suddenly turning an abrupt angle in the river, an unexpected light burst upon us. Looking up, a beautiful rainbow, arched directly over our heads, was seen, while for miles beyond we had a view of a magnificent park, with its green grass, timber, and clear streams winding their way down the valley, or falling in cascades to mingle with the waters below. I regretted from the first the embarrassments connected with the prosecution of our enterprise, but never so much as at this particular time, when unable to put this gorgeous spectacle upon canvas. We are in the habit of alluding to the scenery of Europe; our artists visit those localities, forgetting that in the center of our own continent a more inviting field is opened up before them, as much superior in grandeur and magnificence as the snow-capped mountains of our Western empire tower above the hills of the Rhine. For seven hundred miles from the Gulf of California, but three streams enter the Colorado: the Gila, one hundred and fifty miles from the mouth, Bill Williams's Fork, four hundred miles; and the Virgin, six hundred and sixty miles; while in the distance of three hundred miles from where we started, on the main divide of the Rocky Mountains, twenty streams carry their water to the Colorado, the principal of which are the Swan, Snake, Ten Mile, Eagles, Roaring Forks, Little Grand, and Granite. In passing by the mouths of many of these we were apt to be deceived in the extent of country and quantity of timber along each. In ascending several of these streams, I was in every instance surprised to find the largest pine and cedar, and the most luxuriant grass and wild grain, the latter not confined to a few acres, but extending as far as the eye could reach. Along these and the country southwest the finest facilities are offered for stock-raising, where herds can change their grazing without scarcely changing their position. Here the ox can fatten without knowing his master's crib. Tar wells or springs are found about thirty miles north of the Grand, below the entrance of Elk Creek, two hundred and sixty miles from Breckinridge. This sticky or inflammable substance comes out of the ground over an extended section of the country, and is similar to that used at Los Angeles, California, for making pavements and roofs. Birds and squirrels are found in this, where they have perished in their efforts to extricate themselves. At a number of the smaller streams I saw oil floating upon the surface, similar to that of Pennsylvania, and near Bear River, Utah Territory.

At the entrance of two cañons I found slate banks, rising five hundred feet high; through these were a number of coal veins. I believe there is an abundance of this in the vicinity. At the mouth of Salt River the finest quality of salt is seen. The salt licks near this are frequented by vast herds of deer and sheep. Above and below these the steam from the warm springs resembles smoke from camp fires in the distance. The Utah Indians inhabit this country from the base of the Rocky Mountains. Southwest five hundred miles, a constant warfare is waged between these and the Arapahoes, Cheyennes, and Sioux Indians, who frequently come into the parks. The only explanation given of the cause of their hostility is, that their forefathers fought each other. The skulls and bones of buffaloes found on every plain, and in every valley and stream, and the deep-worn trail of these, frequently three feet in depth, indicate that at one time these must have been very numerous. For some cause they have disappeared years since, but the vast herds of elk, deer, and sheep, the streams filled with the finest fish, and climate and water unsurpassed, make this emphatically the hunter's paradise. Below the country occupied by the Utah tribes, the Moquis Indians live, in stone houses; they raise sheep and goats, grapes and peaches, and manufacture the finest blankets. This tribe acts mostly on the defensive. Their humanity, their customs, and their knowledge of astronomy, although limited, place them far above the Apache and other tribes living further in the interior of the Territory. The silver manufactured by this remarkable people into ornaments must be smelted from the silver quartz by a process known to themselves, or taken from the slag everywhere found around the abandoned mines to the southeast, which evidently have been worked centuries ago. Some of the trees grown over these indicate their age to have dated back long before the first establishment of settlements upon the Atlantic coast. Many of the customs of the Moquis are similar to those of the Pimos and Maricopa Indians, who live upon the Gila River, and have successfully raised grain in the same fields, without diminution, for the last two hundred years, and whose boast it is that they have never shed a white man's blood. The overflow yearly of the Gila, like the Nile, enriches the soil, some of their fields being fifteen miles in length. The number of these tribes and their locations on the plains operate as a wall of protection from the attacks of the Apaches.

There is a large section of Arizona, commencing at a point five hundred and fifty miles from the mouth of the Colorado River, and running in a direct line nearly southeast to

the southern boundary of the Territory, the river forming the western side of this extended angle. The country comprised in this, (with the exception of the lands immediately along the Colorado or Gila Rivers,) is one extended irreclaimable waste. The development of the mines, miles back from each, and the distance from water and timber, must be always attended with much expense. Across this belt and desert, up the Gila, the Government has expended millions in the transportation of supplies; the length of the road, the poor inducements for settlements, the facilities offered for successful attack and escape of the Apaches, and the uncertainty of raising grain or stock must continue to keep the country in the unenviable situation that it has been for years. Immediately opposite to this angle, in California, there is also a section equal in barrenness, but far greater in extent than the country I have described. Had this been settled first, and the same tenacity shown to remain in this state of superlative desolation, as has unfortunately been the case of parts of Arizona, the position of each would be similar. But how different are the relative positions! From the first millions have been taken and thrown into circulation from the rich minerals in the mountains, while in the other, throughout the length and breadth of her territory, (although possessing resources second to no other,) is written in unmistakable lines the "masterly inactivity" which has been insuperably connected with her existence. What Arizona demands is not the self-inflation of the inferior sections now pretended to be settled or improved, but progressive practical development. When this is accomplished, the yield of her precious metals and her soil will be appreciated by the national Government, and no longer be as she is now, and has been, a pensioner and a burden upon the military department of the nation.

In Central Arizona the most numerous ruins are to be found of cities, fortifications, canals, mines, &c. It would be impossible for me to enter into a description of all these. One of the most prominent is that of Casa Blanca, or the Hall of the Montezumas. This stands several stories in height, and looms far above every other object on the plains around. The walls are six feet thick, plastered with a lime or cement which appears to defy the power of the elements. Over the door and windows the cedar timber is in a perfect state of preservation, although it must have been ages since these were hauled over the long route from their native forests. The Indians can trace it back two hundred years. Such is the dryness of the atmosphere that time has produced but a slow change upon it. The streets of the city of which this structure formed a prominent part can be traced by the broken pieces of crockery-ware and the elevation on each side. Immediately back is seen the canal, which once conveyed water to this city of the past, and to the extended fields bordering the river below. At Tuback a more modern ruin is to be found. The walls of the cathedral are yet perfect; the altar is covered by shrubbery, which had grown up spontaneously; and over the cross, on the windows and doors, the vine yet clings, as if to protect them from the beams of the sun as they shine through this roofless temple. This city was but a few years since inhabited by a large population; but the Apache had been there and made a common waste, the evidence of whose vandalism is seen over every beautiful valley and deserted ranch. So complete has been their desolation that all that is now left to tell the tale are a few grape-vines, a half-filled spring, and the silent, isolated cross standing over the graves of their victims.

A company have succeeded in turning the water again into one of the ancient canals; for miles it ran around the hills and across the valleys, where it discharged itself over a beautiful sloping plain, embracing thousands of acres of the richest land, which makes this the most successful farming settlement in the Territory. At the summits of some of the highest hills, fortifications, with their narrow passes, yet frown upon the country below. The solitary cross, the abandoned altar, the broken arch, and the deserted mine, are all we have to speak of a people for whose history we may search other records in vain. Perhaps these may be the ruins erected by the Spaniards at a time when the ships of Spain rode in triumph upon every sea, and the glittering arms of Castile and Aragon were seen upon every land. The richest quartz-mining districts in most mineral countries are generally in the immediate vicinity of a limited extent of good agricultural land. Although this Territory may not be large, yet the soil can produce much more profit, as the demand is great, and consequently the price of every article the farmer raises, higher. I believe there are no richer gold and silver mines in the United States than those commencing at the western slope of the Rocky Mountains and extending throughout Arizona, but a combination of causes have heretofore prevented the development of the latter; among the most prominent have been the facts that the country not having been on the direct line of communication between the East and West, the injudicious system of sending inexperienced agents to take charge of mines, and the high prices and uncertainty of getting provisions and machinery to the different places of operation.

A change will rapidly be produced in all these respects when the natural avenues leading to these are known and improved. The wonder then will be, why so long a night of darkness and uncertainty has rested upon this valuable portion of the public domain. Then population and capital will pour into Arizona, where a Territorial gov-

ernment was established years ago, and which has been noted for retrogression ever since, until it was not a question to be decided whether there was a government and population with strength to stand, but rather if there was sufficient circulation or pulsation to prove that it had an existence. The history of Arizona proves her to have been an unfortunate exception to her sister Territories. With none of her advantages, these have been rapidly filled up by a large population; capital has been profitably invested in them; yet Arizona, with a population of 6,000 in 1863 and 1864, at the last election for delegate to Congress did not contain 400 legal voters in the entire Territory, and there were not two quartz mills in successful operation. There must be a cause for this inactivity and retrogression, which must be remedied by settling up more favorable parts of the Territory, that these may give strength and security to those in other parts, rather than by the unsupported and unreliable statements of a former executive of the Territory, (made against the repeated remonstrances and appeals of the suffering settlers,) that there were but 600 hostile Apaches in the Territory, the result of which has been (as predicted) great expense to the Government, no protection to life and property, and the massacre by Indians of hundreds of settlers, whose graves mark every trail and road throughout the lines of communication of the Territory, until she presents to-day one extended cemetery of the dead, and its numbers still increasing. I am warranted in saying that had it not been for the military post, around which the contractor and settler have remained, the limited population of one of the richest Territories of the United States must have been much less than it is at the present time. The history of all our early settlements, Kentucky among others, has demonstrated that the richest portions of the country have been those sections where game was abundant and the Indians most hostile to the advancement of civilization. This has been preëminently the case in that portion of the Territory inhabited by the Apaches, and who have for three hundred years driven the effeminate Mexican, and compelled the States of Sonora, Chihuahua, and Sinaloa to pay them tribute. Most of the vast section of country, sufficient for four States, extending from the San Francisco range of mountains on the west to the western range of the Rocky Mountains on the east, is well adapted for agriculture and mining operations.

Had this country and that further south been settled up first, there would have been that permanency to every interest which is calculated to give character to the mineral and agricultural resources, instead of seeing to-day a Territory which can almost be said to be one of unlimited mines without mills, fields without occupants, churches without worshippers, and millionaires without capital. These are the inevitable results which have been produced from the mistaken policy of following close in the wake of the idle Mexican, whose settlements have been made under compulsion, and who, ever since, has not had the energy or the courage to change them. The whole history of Arizona, in the past and in the present, presents nothing encouraging, unless a different policy be adopted than that which has characterized her development for the last fifteen years. This is indelibly written, in unmistakable language, over the entire Territory—so self-evident as not to require an argument.

The immense yield of silver and gold from Nevada, Idaho, and Montana, (discovered long after those of Arizona,) has drawn to these immense capital and a large population of permanent residents; while the latter, having the advantage of soil, climate, water, mines, and geographical position, remain unimproved; and the continued inaction is only broken by the noisy politicians, clamoring for the votes of a class most of whom neither know nor care for their responsibility as American citizens. It resolves itself into a question of political economy, to be warned by the history of the past, and to examine the real causes which have produced a prostrating effect upon the territory settled, as well as preventing the development of other sections, which in valuable resources are unsurpassed by the most favorable localities in other States or Territories. I am aware, in making these statements, that they may not be popular, but my duty compels me to give you the facts as they have developed themselves under my immediate observation.

In all the individual explorations directed toward the center of Arizona and further east, and southwest from Prescott, Arizona; Callville, Nevada; New Mexico and Colorado Territories, each have returned with the most favorable results. The snow-capped summit of San Francisco Mountain, which can be truly called the Mont Blanc of the West, looms far above every other object around. From the base of this, and the range of which it forms a part, many streams water the valleys and discharge themselves into the Colorado, the common reservoir of a territory thousands of miles in extent. On the heads of the streams running into the river more evidences, perhaps, are found of ancient successful mining operations than in any other portion of the United States. Owing to the excessive labor and exposure in descending the river with our boats from the summit of the Rocky Mountains, and the loss of our mining tools in the cañons, we were unable to prospect as we desired. All the instrument used in washing dirt for gold was an imperfect pan for baking bread, yet in every trial we succeeded in getting a fair prospect. I am satisfied that fruit and grain could be raised at any point ninety miles southwest of the point where we descended from the mountains. For grazing

purposes this country is unsurpassed. Sheep can range upon a thousand hills—no unhealthy climate to prevent their rapid increase—while everywhere water-power is found for milling purposes. With such a grazing country it is a reproach that 50,000,000 pounds of wool is annually imported into the United States. Here is a combination of advantages in all that is calculated to make a self-sustaining empire. The temperature, after crossing the main divides of the Rocky Mountains west, is much milder than in the same latitude on the east. This appears to increase as you approach the Pacific, and is strikingly evidenced in the rapid advancement of the wild berries, grass, and timber. This may be produced by the mild winds of the Pacific, as they sweep up from the ocean unobstructed by the Sierra Nevada or Coast range of mountains, which lose their identity or disappear near San Diego Harbor. As I stated before, the greatest yield of placer gold is found at the sources of the Colorado. The facilities for making all the mines by the hydraulic system, the cheapest and most successful, can be equalled, if not surpassed, by the streams having their heads in the range of the San Francisco Mountains; and while the miners of the first are confined to but six months' operations in the year, they could work twelve months in the latter. The forests of pine and other valuable timber near the Colorado and on its tributaries must be the source of great wealth to the country. All the lumber and coal used on the Lower Colorado has heretofore been brought from Puget Sound and San Francisco. It was necessary to bring this by the ocean several hundred miles, and up the Gulf of California and the river, where lumber commanded from $200 to $400 per 1,000 feet, in gold, while upon the Colorado above was found an excellent quality, and a stream upon which it could be carried to a market in Arizona, Nevada, California, and Mexico, or used in the construction of the railroad crossing the Colorado, and destined to connect the Atlantic coast with the magnificent harbor of San Diego, on the Pacific. Why the great advantages of this route, and of the resources of the country to which I have called your attention, have been so little appreciated until this late day, is remarkably strange, unless it was that another route, less favored by nature, might receive that early impetus so necessary to its completion, without which it could not have been enabled to join that trinity of railroads destined to unite the waters of the Atlantic and the Pacific. It is not my purpose to deprecate other routes. The indomitable will and enterprise which has characterized those who have already completed the Central and Union Pacific Railroads is certainly commendable, while the timber, water, and distance of the northern route are also advantages which every American of enlarged conceptions of his country's destiny should be glad to know. Twenty-five ages have fought for the commercial route to the Indies: here it is, upon the southern line, in time of peace, without the cost of conquest. The mines of gold, silver, copper, lead, and coal, and the soil, timber, and climate, all are anxious to pay tribute to this artery of the world's commerce, which cannot be obstructed by streams in summer or snows in winter. Who can conceive the benefits to flow from its completion, as well as others which are to bind us together in bonds of a common nationality so strong as never to be broken by intestine war at home or by hostile attacks from abroad?

I have thus, in a hurried and disconnected manner, endeavored to give you a few facts concerning the individual explorations with which I have been connected for the past four years and a half. Having been most bitterly opposed from its commencement, receiving no assistance from any quarter, I was unable to pursue its object as I desired. This report will be followed by others more perfect, and by those more capable of doing justice to the subjects to which I have called your attention. But while acknowledging the imperfection of this, I will yield to no one in an honest endeavor to benefit my country and to promote the interests of our Western empire. I cannot close without taking this occasion to give my thanks to the military officers at Fort Russell and Omaha City, and the officers of the Union Pacific, St. Louis and Terre Haute, Pittsburg, Cincinnati, and Columbus, Allegheny Valley, and Pennsylvania Central Railroads, for the kind courtesy extended to me on my way to this city.

Hoping the subject-matter of the report may meet with that consideration it deserves, I am, respectfully,

SAMUEL ADAMS.

Hon. WILLIAM W. BELKNAP,
Secretary of War.